

ABSTRACT

5 A soft-reference three conductor magnetic memory storage device is disclosed. In a particular embodiment, there are a plurality of parallel electrically conductive first sense/write conductors and a plurality of parallel electrically conductive second sense conductors. The first sense/write and second sense conductors may provide a cross point array. Soft-reference magnetic memory cells are provided in electrical contact with and located at each intersection. In addition there are a plurality of parallel electrically conductive third write column conductors substantially proximate to and electrically isolated from the second sense conductors. Sense magnetic fields orient the soft-reference layer but do not alter the data stored within the cell. An associated method of use is also provided.

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